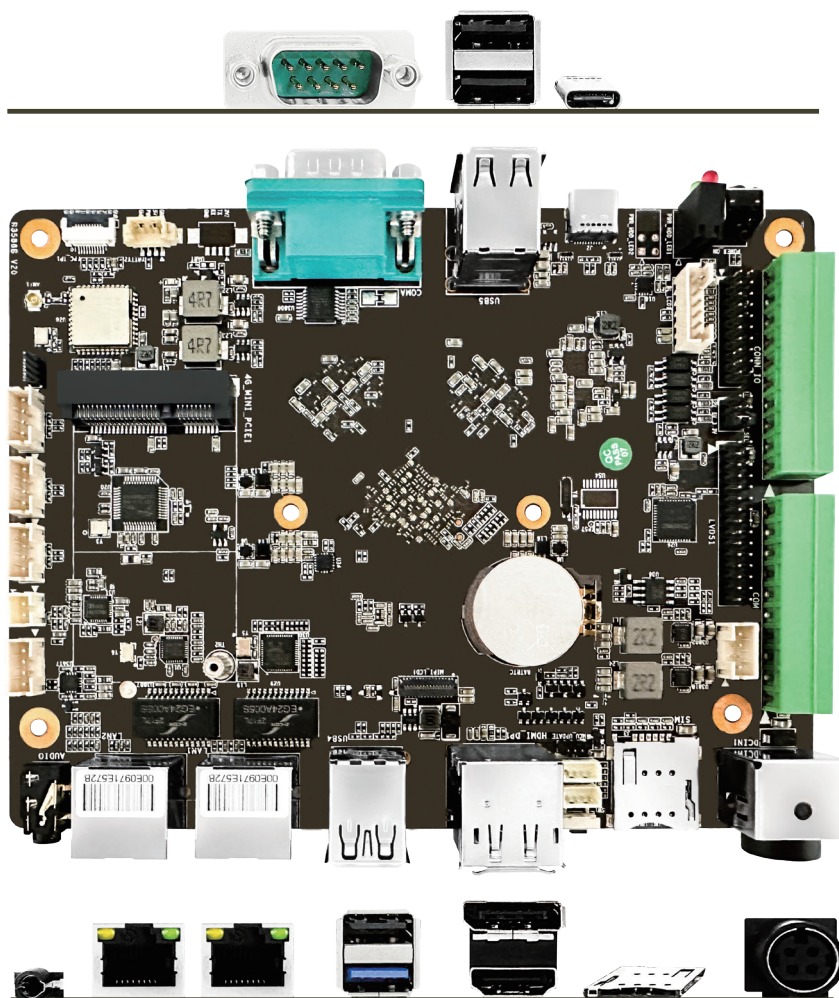


ZA-RK3588B-832 Motherboard

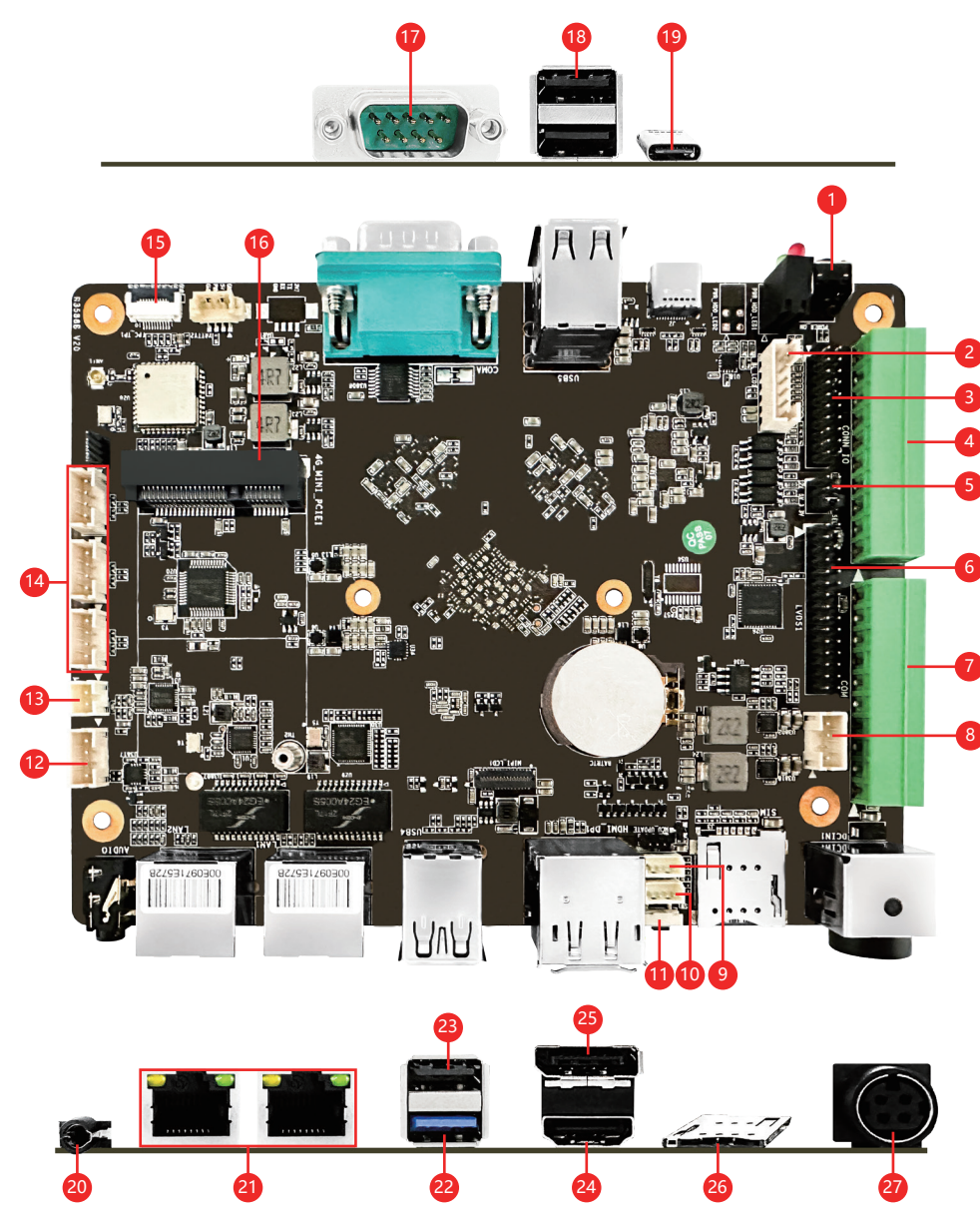
Product characteristics:

- RK3588 8nm process, ARM 8core 64bit CPU NPU 6TOPS
- Support 1*HDMI/1*LVDS/1*EDP/1*DP Displays the output
- Support 8*USB(3*USB2.0 interface/3*USB2.0 Pin/1*USB3.0 interface/1*TYPE-C interface)
- Support 2*LAN(1Gbps/100Mbps/10Mbps Ethernet Controller; Support 2.4G/5GWIFI (select)
- Support Four IO inputs Four IO outputs



ZA-RK3588B-832 Motherboard Specifications

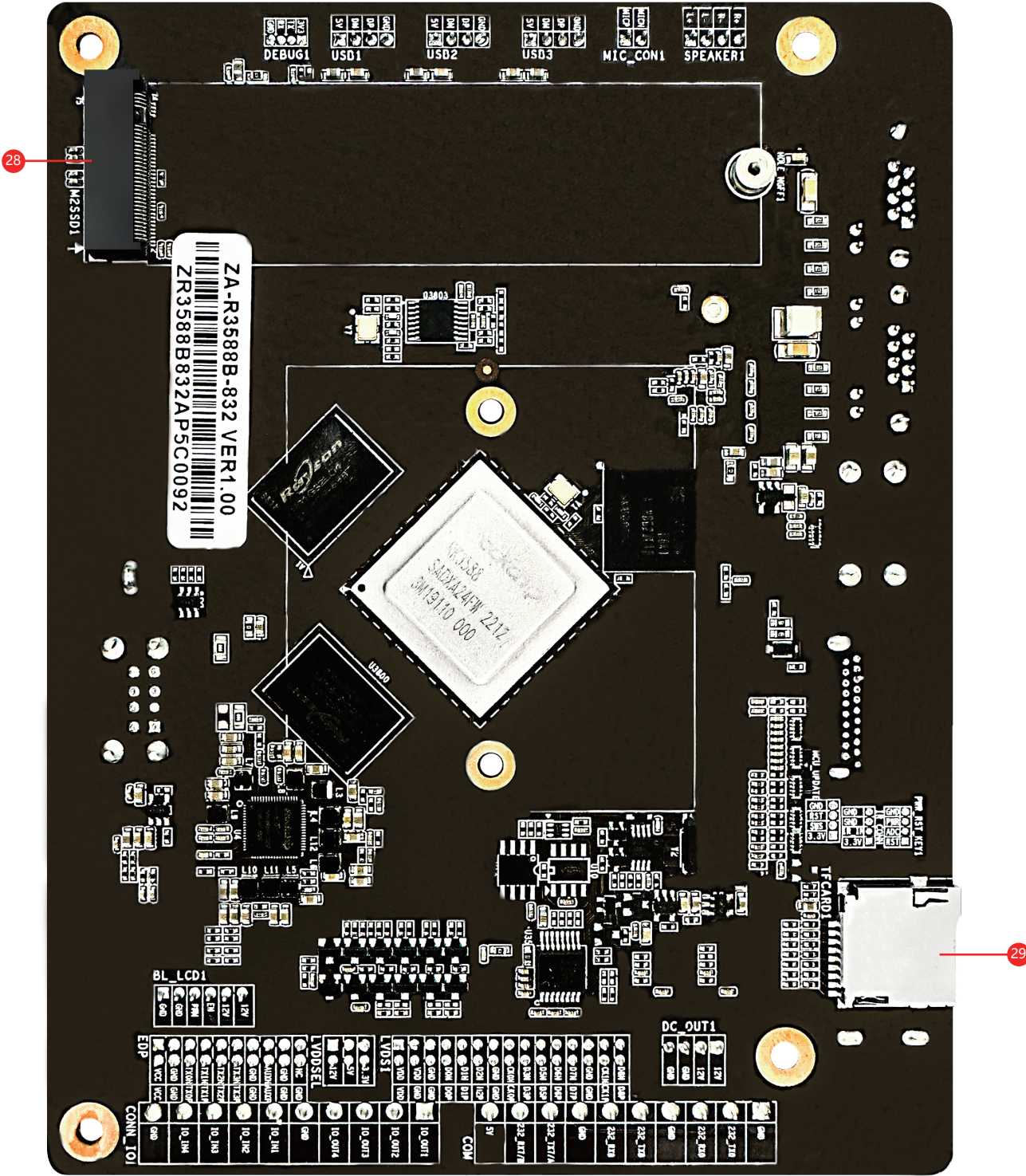
Size	150mm*115mm
CPU	Rockchip RK3588 8nm process, ARM 8core 64bit CPU, 2.4GHZ, 4core Cortex-A76+4core Cortex-A55)
GPU	Mail-G610 GPU 4core
RAM	LPDDR4/4X 8G (8G/16G/32G Optional)
EMMC	32G(Optional 64/128G)
Internal I/O	1*LVDS/EDP LED 1*EDP Pin 1*IO Input Output Pin 1*LVDS Jumper 1*LVDS Pin 1*COM Pin(RS232*2+RS485) 1*DC IN/OUT Pin 1*IR_CONN Pin 1*POWER Signal Pin 1*SPERKER Pin 1*MIC_CON Pin 3*USB2.0 Pin 1*TP Touch interface
Rear I/O	1*DB9(RS232) 3*USB 2.0 interface 1*USB3.0 interface 1*TYPE-C interface 1*Audio interface (Supports audio output and microphone input) 2*LAN(100/1000M) 1*HDMI interface 1*DP interface 1*SIM Slot 1*DC 12V interface 1*TF Slot
LAN	2*1Gbps/100Mbps/10Mbps Ethernet Controller
WIFI	Support 2.4G/5GWIFI (select) / 4G_MINI PCIE slot
Expansion slot	1*M.2 SSD slot
Operating System	Android 12 system, Open root access allows for custom product development



The diagram shows a mainboard with various components labeled with red numbers 1 through 27. Callouts 1-19 are on the top and right sides, while 20-27 are on the bottom. Callouts 9, 10, and 11 are also located on the bottom edge of the mainboard itself.

1	Power button
2	LVDS/EDP LED
3	EDP Pin
4	IO Input Output Pin
5	LVDS Jumper
6	LVDS Pin
7	COM Pin(RS232*2+RS485)
8	DC IN/OUT Pin
9	IR_CONN Pin
10	POWER Signal Pin
11	Upgrade key
12	SPERKER Pin
13	MIC_CON Pin
14	USB2.0 Pin
15	TP Touch interface
16	4G_MINI_PCIE slot
17	DB9(RS232)
18	USB 2.0 interface
19	TYPE-C interface

20	AUDIO interface	24	HDMI output interface
21	LAN interface	25	DP interface
22	USB3.0 interface	26	SIM Slot
23	USB2.0 interface	27	DC 12V interface



28	M.2 SSD slot	29	TF slot
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ZA-RK3588B-832 Mainboard Definition

(2) LVDS/EDP LED

Location	Pin	Definition
BL-LCD1	1	GND
	2	GND
	3	BL_ADJ
	4	BKLT-EN
	5	+12V
	6	+12V

(3) EDP Pin

Location	Pin	Definition	Pin	Definition
EDP1 (2mm)	1	VCC	2	VCC
	3	GND	4	GND
	5	D0N	6	D0P
	7	D1N	8	D1P
	9	D2N	10	D2P
	11	D3N	12	D3P
	13	GND	14	GND
	15	AUXN	16	AUXP
	17	GND	18	GND
	19	GPD	20	GND

(6) LVDS Pin

Location	Pin	Definition	Pin	Definition
LVDS1 (2mm)	1	VDDLVD	2	VDDLVD
	3	VDDLVD	4	GND
	5	GND	6	LVDS_DP
	7	LVDS_DATA_0N	8	LVDS_DATA_0P
	9	LVDS_DATA_1N	10	LVDS_DATA_1P
	11	LVDS_DATA_2N	12	LVDS_DATA_2P
	13	GND	14	GND
	15	LVDS_CLKN	16	LVDS_CLKP
	17	LVDS_DATA_3N	18	LVDS_DATA_3P
	19	LVDS1_DATA_0N	20	LVDS1_DATA_0P
	21	LVDS1_DATA_1N	22	LVDS1_DATA_1P
	23	LVDS1_DATA_2N	24	LVDS1_DATA_2P
	25	GND	26	GND
	27	LVDS1_CLKN	28	LVDS1_CLKP
	29	LVDS1_DATA_3N	30	LVDS1_DATA_3P

(7) COM Pin

Location	Pin	Definition	Pin	Definition
COM1 (2.54mm)	1	GND	2	UART0_232_TX
	3	UART0_232_RX	4	GND
	5	UART8_232_TX	6	UART8_232_RX
	7	GND	8	485A
	9	485B	10	5V

(14) USB Pin

Location	Pin	Definition
USB1	1	5V
	2	DM
	3	DP
	4	GND

Location	Pin	Definition
USB2	1	5V
	2	DM
	3	DP
	4	GND

Location	Pin	Definition
USB3	1	5V
	2	DM
	3	DP
	4	GND

(4) CONN_IO Pin

Location	Pin	Definition	Pin	Definition
CONN_IO	1	IO_OUT1	2	IO_OUT2
	3	IO_OUT3	4	IO_OUT4
	5	GND	6	IO_IN1
	7	IO_IN2	8	IO_IN3
	9	IO_IN4	10	GND